

CLAIMS

1. A display device (100), comprising:

5 a flexible substrate (110) carrying a matrix array comprising:
- a plurality of first conductors (120);
- a plurality of second conductors (130), each of the second conductors crossing the plurality of first conductors (120); and
- a plurality of pixels (140), each pixel being located in the vicinity of a crossing of a first conductor and a second conductor, the pixel comprising a electro-optical element (142) being addressable by the first conductor and the second conductor;

10 the display device (100) further comprising:
a flexible shift register (150) for addressing the plurality of first conductors (120), the flexible shift register (150) comprising a plurality of shift register cells (152), each shift register cell being coupled to one of the first conductors.

2. A display device (100) as claimed in claim 1, wherein each pixel (140)

20 comprises a switch (144) coupled between the associated second conductor and the electro-optical element (142), the switch (144) comprising an organic semiconductor material and a control terminal coupled to the associated first conductor.

25 3. A display device (100) as claimed in claim 1, or 2, wherein each shift register cell (152) comprises a plurality of further switches, each further switch comprising a further organic semiconductor material.

4. A display device (100) as claimed in claim 3, wherein the shift register (150) is carried by the flexible substrate (110).

5. A display device (100) as claimed in any of the claims 1-4, wherein the shift register (150) is carried by a further flexible substrate (210), the further flexible substrate (210) being bonded to a first side of the flexible substrate (110).

5

6. A display device (100) as claimed in any of the claims 1-5, wherein the shift register (150) comprises a first plurality of connectors (154; 156; 158) for connecting the shift register (150) to external control circuitry.

10 7. A display device (100) as claimed any of the claims 1-6, wherein the display device (100) further comprises a further flexible shift register (160) for addressing the plurality of first conductors, the further flexible shift register (160) comprising a plurality of further shift register cells (162), each further shift register cell being coupled to one of the first conductors, the further shift
15 register (160) being arranged in parallel with the shift register (150).

8. A display device (100) as claimed in claim 7, wherein the further shift register (160) is carried by the flexible substrate (110).

20 9. A display device (100) as claimed in claim 7, wherein the further shift register (160) is carried by a second further flexible substrate (270), the second further flexible substrate (270) being bonded to a second side of the flexible substrate (110).

25 10. A display device (100) as claimed in claim 7, 8 or 9, wherein the further shift register (160) comprises a second plurality of connectors (164; 166; 168) for connecting the further shift register (160) to external control circuitry.

30 11. A display device (100) as claimed in 6 or 10, wherein the display device (100) further comprises a further plurality of connectors (132) on a third side of the flexible substrate (110), the plurality of connectors (132) being conductively

coupled to the plurality of second conductors (130) for connecting the second conductors of the display device (100) to external control circuitry.

12. An electronic device (300) comprising:

5 control circuitry (324) for controlling a display device (100) as claimed in claim 11; and

a second further plurality of connectors (322) coupled to the control circuitry, the second further plurality of connectors (322) being arranged to interconnect the control circuitry (324) to at least the first plurality of connectors
10 (154; 156; 158) and the further plurality of connectors (132).